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Research paper

Effects of Accreditation Program on Leadership, Organizational Culture, Activity and Performance of Hospital Management

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Abstract

This study aimed to look into changes in patient safety of medical institutions and improvements in the quality of medical services with the implementation of the accreditation program and investigate the influences and relationships of the leadership, organizational culture and hospital management activity in accredited medical institutions with their management performance perceived by workers at the accredited hospitals. To summarize the results of the study, there were significant impacts of the accreditation program on the increase in the efficiency of the hospitals and the promotion of the spirits of employees. But referring to the finding that it did not have any significant influence relationship with the increase in their income of medical treatment or cost reduction. Political alternatives from financial perspective should be prepared in order to attract spontaneous participation in the accreditation of the medical institutions in the future.

Keywords: *Accreditation Program, Leadership, Organizational Culture, Balanced Scorecard*

1. Introduction

In South Korea, health concerns have increased and the acquisition of professional information became easier with the improvement of its income level and the development of ICT through rapid industrial developments. A system for the evaluation of medical institutions has been implemented since 1994 in order to provide the medical services with good quality and reinforce medical management as a plan to improve the level of consumers' medical knowledge and meet their needs. The system for the evaluation of medical institutions was implemented to ease the deepening imbalance and gap among medical institutions, in terms of facilities, the phenomena of inclination of the patients to large hospitals and non-operation of small and medium sized hospitals. To improve patients' awareness of medical services rights and meet their demand for quality medical services, and for medical institutions, advantages, such as the improvement of hospitals' services through the preparation for evaluation, discovery of their own problems through the process of evaluations, marketing effects and the improvement of the problems from the results of evaluations have been brought into relief [1]. However, as a result of the evaluations of the perception of workers at medical institutions about the evaluation of medical institutions, the problems of the several areas about the system for the evaluation of medical institutions was brought up. Although the primary purpose of the system for the evaluation of medical institutions is the 'improvement of the quality of medical services', it consisted of quantitative or objective criteria for evaluation by nature, so there was a limit for qualitative improvement, and a problem of large costs incurring by investment in facilities was pointed out [2].

In addition, as a result of promoting medical institutions sequencing and evaluation through the open of evaluation rating, so the image tarnished and services of sub-level agency may be given up [3], and there were the complaints in the field that the culture and characteristic of the individual medical institutions cannot be reflected due to the unilateral valuation basis, and there was the side effect by the excessive corresponding temporarily for the evaluation [4-5].

The medical law was revised in July 2010 for the supplementation of the weak points of the existing evaluation system and the substantial patient safety and medical quality improvement, and the medical institutions' accreditation program was diffused all over the country. It is reported that newly formed accreditation criteria refer to the existing criteria for the evaluation of medical institutions and those of JCI, ISQua(International Society for Quality in Healthcare) and consider the characteristics of the domestic medical environment. And yet, there have been several negative results of studies on the effects on the patient satisfaction regarding service quality or organization in the U.S. or European countries where there is a long history of accreditation programs. As a result of research on the satisfaction of the patients who were treated at the accredited medical institutions and non-accredited medical institutions in Germany where a similar accreditation program to that of the U.S. was implemented. Sack et al.[6] showed that there was no significant relationship with medical quality perceived by the patients, and there was no difference between accredited and non-accredited rehabilitation hospitals regarding the effects of the accreditation program [7].

In Korea, there was no direct effect of the system for the evaluation of medical institutions on the business performance of the medical institutions, but there was opinion about the indirect effects by the services quality and services value as the parameter [8-9]. Woo et al. [10] presented the result on the comparison of the evaluation of medical institutions rank and management efficiency about the dental university hospitals, and though the hospitals

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securing high scores from the dental evaluation of medical institutions may not operated efficiently.
Thus, in most countries, there are active discussions about the performance of accreditation evaluation program, but in Korea where there is about 90% of the private medical institutions, but there was no study on the leadership of medical institutions and organizational culture change by the accreditation program or the effects of the factors on the hospital management activity and hospital management performance. The reason is that the introduction of the certification system in Korea is at an early stage. So the concrete and objective results about the change of the medical institutions after accreditation should be drawn, and the degree of changes in the leadership and organizational culture by type after the accreditation evaluation and the effects of the leadership and organizational culture on the hospital management activity and hospital management performance will be verified.
This study specifically aims to verify the effects of the leadership, organizational culture and hospital management activity of accredited medical institutions on the hospital management performance, perceived by workers at accredited hospitals and draw a model of the relationships among the factors.

2. Materials and Methods

2.1. Model of study

The accreditation evaluation system consists of the basic system of values, a treatment system for patients and an administrative management system by the evaluation area used by the Korea Institute for Healthcare Accreditation, and sub-variables that the evaluation indices by each area were structured into questionnaire items were used for analysis.
The leadership type was composed of two types: transactional leadership and transformational leadership by using the MLQ measurement tool [11].
Regarding the types of organizational cultures, Step 1 consisted of culture of human resources, open system culture, hierarchical sequence culture and production-centered culture based on the competition value model; Step 2 was restructured as professional cultural control and bureaucratic cultural control among the roles of leadership of the competitive value model [12-13]. It was proposed that the role of leadership of the professional cultural control has characteristics of facilitator, mentor, innovator and broker. Bureaucratic cultural control has characteristics of the producer, director, coordinator and monitor. Based on this, the hierarchical sequence culture and production-centered culture, included in the official control structure, were restructured as bureaucratic culture, and culture of human resources and open system culture with more social and general characteristics in various areas were restructured as professional culture.
The hospital management activity factors were composed with the learning and growth aspect, internal process aspect, customer aspect as the non-financial aspect of BSC [14], and the hospital management performance factors were composed with the medical profit increase and cost reduction having the characteristic of financial performance, and increase in the hospital efficiency and promoting spirits of employees having the non-financial characteristic. Schneiderman [15] suggested that the learning and growth in the non-financial aspect and the indices in the customer aspect take the independent variable role in the BSC system, and the indices of the financial aspect take the dependent variable role.

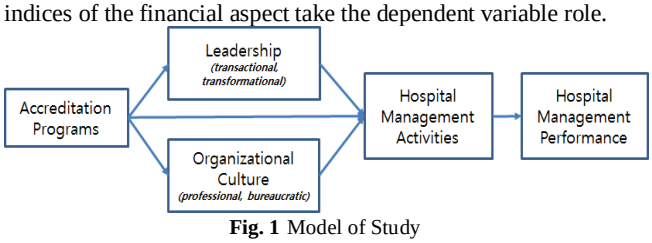

Fig. 1 Model of Study

2.2. Subjects of study and methods of data collection

Regarding the research subjects, a survey was conducted by using the self-administered method of the respondents after the distribution of the structured questionnaires based on the all occupations (medical officer, office workers, nursing, medical technicians, other jobs) in the certified medical institutions in the result of evaluation of the Korea Institute for Healthcare Accreditation. The survey was conducted by the e-mail survey and visit cooperation method in two times from September 8 through October 28, 2011 and a total of 850 questionnaires were distributed, and 749 questionnaires were collected, and among those, 714 questionnaires excluding 35 questionnaires with insincere responses were used for the analysis. The accredited hospitals participated in the survey were a total of 23 institutions. There were 17 tertiary hospitals (73.9%) more than 6 general hospitals (26.1%) according to division by the type, and there were more than 500 beds in all the institutions.

2.3. Analytical methods

In order to analyze the data collected, the statistics program IBM SPSS V20.0 was used, and AMOS V20.0 was used for the analysis of covariance of the structural equation modeling. In order to exam the mutual relation between factors, the analysis of covariance was conducted through the model generating strategy of the structural equation modeling. The analysis of covariance applying the structural equation modeling was composed with seven latent variables such as the accreditation evaluation system, transformational leadership, transactional leadership, professional culture, bureaucratic organizational culture, hospital management activity, and hospital management performance, and the observed variables by each latent variable were 10 in total.

3. Results and Discussion

3.1. Results of study

In order to verify the relations between the accreditation evaluation system and leadership, organizational culture, hospital management activity, hospital management performance recognition, the mutual influencing relationship was verified after the path model made. A total of 666 cases except the missing case among 714 cases were used for an analysis. If there is missing value in measurement variable, it can be analyzed by applying the estimate means and intercepts, but it is impossible for the outputs of RMR, GFI and AGFI as the absolute fit indices to verify the overall fitness and explanatory power of the model, because of the decreased validity for judging the model fitness.
As the analysis model, the hospital management Performance (Perf) was set as the final endogenous latent variable, and the Accreditation evaluation system (Acc) was selected as the exogenous latent variable which has effects on other variables. The transformational leadership (Ls_Tf), transactional leadership (Ls_Ts), professional culture (Cul_Pro), and bureaucratic culture (Cul_Beu) were set as the observed variable which has effect on the hospital management activity, and the hospital management activity (HMA) was set as the endogenous/exogenous latent variables which have effect on the latent variables, and the observed variables consisted of the learning and growth aspect (HMA_E), internal process aspect (HMA_P), customer aspect (HMA_C). The observed variables of the accreditation evaluation system were the basic values system (Acc_BV), treatment system for patients (Acc_PT), administrative management system (Acc_AM), and the observed variables of the hospital management performance as the endogenous latent variable were composed with the increase in income of medical treatment (Perf_1), cost reduction (Perf_2), an increase in the hospital efficiency (Perf_3) and the promotion of spirits of employees (Perf_4).

In addition, for the influence of all error terms included in the model, regression weight was fixed at 1 in order to judge model fitness. This method is one of the movable fit methods applicable to an analysis of structural equation modeling, and not fixing the regression weight constantly may lead to a result that cannot comprehend the influences among the variables to capture in this study properly. Regarding the results of analysis of the path model, the evaluations of the model fitness using an absolute fit index to evaluate the overall fitness of the model, an incremental fit index to compare the fitness of the proposed model and a parsimonious fit index to judge the simplicity of the model resulted in the table 1. The most basic χ^2 (CMIN) of the absolute fit index was 466.7 ($P<0.001$), the degree of freedom 67 and CMIN/DF 6.890, which was a little high. Generally, if CMIN/DF value is lower than 5, the model fit is judged to be in an appropriate level, but the characteristic that if the number of cases increases, χ^2 statistic will also increase should be considered. The less the statistic of Root Mean square Residual (RMR) that measures the size of the variance and covariance that the model cannot explain, the better it becomes, the result of analysis was 0.038, which was at an appropriate level. However, since RMR may have a problem if the measurement unit differs, standardized index SRMR is used usually, and if it is less than 0.08, the model fitness is judged to be good, and the SRMR of the analyzed model was 0.073, which was at an excellent level. In addition, GFI was 0.907, which was at an excellent level while AGFI 0.854, which was at a proper level. For the incremental fit index, NFI 0.920, IFI 0.930, TLI 0.905, and CFI 0.930, and the model fitness was at excellent levels while RFI 0.891, which was at a proper level. In addition, in the parsimonious fit index, PNFI was 0.677 and PCFI was 0.685, and the simplicity of the model was at an appropriate level. Regarding the fitness of the structural equation model, Hair [16] suggested that if the number of cases is more than 200, χ^2 will be statistically significant, and if CFI and TLI are more than 0.9 and SRMR is less than 0.08, the model's fitness will be proper, and the model of this study had appropriate results for all acceptance criteria.

Table 1: Comparison of the results between model acceptable index fitness level.

contents	criteria	results
absolute fit index	χ^2	6.890
	RMR	0.038
	SRMR	0.073
	GFI	0.907
	AGFI	0.854
incremental fit index	NFI	0.920
	RFI	0.891
	IFI	0.930
	TLI	0.905
	CFI	0.930
parsimonious fit index	PNFI	0.677
	PCFI	0.685

In order to analyze the influencing relationship between factors, the standardized estimates were derived. The maximum value of the standardized estimates is 1 in the structural equation, the nearer coefficient the 0 means no effects of the variable. In the result of analysis, the accreditation evaluation system (Acc) had the biggest effects on the professional culture (Cul_Pro) (0.516), and the transactional leadership (Ls_Ts) and transformational leadership (Ls_Tf) followed. But there was a relatively small effect on the hospital management activity (HMA) and the bureaucratic culture (Cul_Beu), and all relations were statistically significant level.

As the biggest effects of the variables on the hospital management activity (HMA), the standardized estimate of the professional culture type (Cul_Pro) was topped with 0.377, and the transformational leadership (Ls_Tf), the Accreditation evaluation system (Acc) factors were followed, and there was little effects of the transactional leadership (Ls_Ts) and bureaucratic culture type (Cul_Beu) on the hospital management activity. Finally, the effects of Hospital Management Activity (HMA) on the hospital management Performance (Perf) were very high level with 0.891. and about the effects of the observed variables on the latent variable, the explanatory power of the treatment system for patients (Acc_PT) was topped in the accreditation evaluation system (0.907), and the administrative management system (Acc_AM), basic values system (Acc_BV) followed, and the hospital management activity was shown in order of learning and growth aspect (HMA_E), internal process aspect (HMA_P), and the customer aspect (HMA_C). In the case of the hospital management performance, the increase in the hospital efficiency (Perf3) had the non-financial performance characteristic and high level of the explanatory power of promoting spirits of employees (Perf4), but the increase in income of medical treatment (Perf1) having financial performance characteristic showed the relatively lower level, and cost reduction (Perf2) variable showed the negative (-) direction in the table 2 and fig. 2.

In the result of analysis, the interesting fact is that the chart of changes into transactional leadership caused by the accreditation evaluation was bigger than the chart of changes of the transformational leadership. It shows that changes into transactional leadership is bigger than the change into charisma, and innovative transformational leadership in the attributes of evaluation and the medical services characteristic attaching great importance to the policies and procedures for the patients' care and safety. However, the effect of transformational leadership was bigger than transactional leadership as the factors which have effects on the hospital management activity. In addition, for the hospital management activity which was composed with learning and growth aspect, internal process aspect, customer aspect, the change of the internal process aspect after the accreditation evaluation was the biggest, but substantially, the factors with the biggest effects on the hospital management activity were learning and growth factors.

Table 2: Relationships among the factors affecting hospital management performance

path between factor			Estimate	St. Estimate	S.E.	P
Cul_Beu	←	Acc	0.194	0.206	0.038	0.000
Cul_Pro	←	Acc	0.687	0.516	0.050	0.000
Ls_Tf	←	Acc	0.594	0.497	0.045	0.000
Ls_Ts	←	Acc	0.600	0.502	0.045	0.000
HMA	←	Acc	0.229	0.271	0.032	0.000
HMA	←	Ls_Tf	0.197	0.279	0.036	0.000
HMA	←	Ls_Ts	0.081	0.114	0.035	0.020
HMA	←	Cul_Pro	0.240	0.377	0.024	0.000
HMA	←	Cul_Beu	0.061	0.068	0.025	0.015
Perf	←	HMA	0.690	0.891	0.044	0.000
Acc_AM	←	Acc	1.000	0.865		
Acc_PT	←	Acc	0.994	0.907	0.033	0.000
Acc_BV	←	Acc	0.861	0.789	0.035	0.000
HMA_C	←	HMA	1.000	0.708		
HMA_P	←	HMA	1.012	0.833	0.048	0.000
HMA_E	←	HMA	1.104	0.859	0.051	0.000
Perf1	←	Perf	1.000	0.481		
Perf2	←	Perf	-0.838	-0.400	0.098	0.000
Perf3	←	Perf	1.454	0.747	0.118	0.000
Perf4	←	Perf	1.774	0.738	0.152	0.000

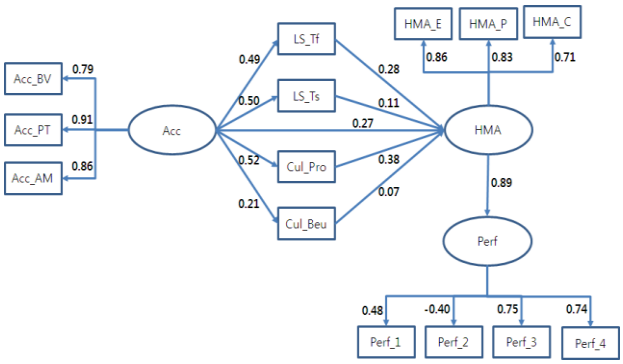

Fig. 2: among the factors affecting hospital management performance

3.2. Discussion

The result of a study by Gough et al. [17] that there was the improvement effect of the change about the patient safety and medical quality improvement through the accreditation program was agreed with the results of this study that the change of the activity for the patient safety and the activity for the medical quality improvement of the research subjects in the accredited hospitals. Duckett [18] suggested the result of study that there was the biggest change of the safety division and department of nursing based on 23 accredited hospitals in Australia, and it was agreed partially with the result of this study that in the chart of changes in patient safety and improvements of medical quality which were relevant to the basic system of values of this study, nursing was most significant. Regarding the effect of the accreditation program on organizational culture and leadership, in a study with two Canada's top medical institutions with different types of establishment on changes in organizational culture after the implementation of the accreditation program by Paccioni et al. [13] there was a bureaucratic culture in both institutions before the implementation of the accreditation program; however, after the implementation of the accreditation program, there was a big change into a professional culture in one institution while there was a big change into a bureaucratic culture in the other institution. In the results of this study, the change into professional culture was bigger than the change into bureaucratic culture, which was partially matching.

In the relation with the impacts of the accreditation program on hospital management activity and business performance, despite a direct comparison is difficult, Pomey et al. [19] argued that the accreditation program changes policy, decision-making behavior and the introduction of a quality control program in hospitals, and this result may belong to the category of changes in leadership and organizational culture as a factor affecting the organization's decision-making in a wide range of meaning. This may be understood as a result of study similar to that of this study in which the accreditation evaluation system affects the changes in organizational culture and leadership. In addition, Fairbrother et al. [20] suggested a result of study in which the implementation of the accreditation program requires a lot of direct and indirect costs, which was similar to the result of this study that the accreditation evaluation system did not have any impacts on the increase in the hospitals' income from treatment or saving of their cost price.

Also, The results of a study by Peterson [21] that it attracts the revitalization of members of the organizations' participation in the process of accreditation and that organizational support has a positive impact on their performance was similar to those of this study that the accreditation evaluation system has statistically significant impacts on leadership and professional culture and that it promotes the efficiency of the hospitals' operation and spirit of the employees through their management activity.

And an interesting fact is that the chart of changes into transactional leadership caused by the accreditation evaluation was bigger than the chart of changes of the transformational leadership. It shows that the change into transactional leadership is bigger than the change into charisma, and innovative transformational leadership in the attributes of evaluation and the medical services characteristic attaching great importance to the policies and procedures for the patients' care and safety. But the effect of the transformational leadership was bigger than the transactional leadership as the factors which have effects on the hospital management activity. In addition, for the hospital management activity which was composed with learning and growth aspect, internal process aspect, customer aspect, the change of the internal process aspect after the accreditation evaluation was the biggest, but substantially, the factors with the biggest effects on the hospital management activity were learning and growth factors. It is judged that the accreditation program introduction had the biggest effects on the process change superficially inside of hospitals, but the learning and growth aspect is most recognized for the hospital management activity by the members.

4. Conclusion

Based on the result of the study, the plan for the activation of the accreditation evaluation system in the future and the major implications for the non-accredited medical institutions to secure the accreditation will be suggested based on the key issues regarding the accreditation evaluation system, leadership, organizational culture, hospital management activity and business performance which were drawn in this study.

First, one of the biggest differences between the existing system for the evaluation of medical institutions and the current accreditation program for medical institutions in the position of the medical institutions is the spontaneous participation method of the medical institutions. The method of promoting spontaneous, active participation will be therefore possible by the recognition that the effect of the medical institutions through the accreditation is clear. And yet, in the result of the study, it had the positive impact on the efficiency performance of operating organizations and promoting spirits of employees, but it was verified that there was no significant influence on the increase in income of medical treatment of hospitals and cost reduction, so there will be the concern about the financial decision-making for the participation in the accreditation in the position of the medical institutions. Thus, the administrative mechanisms to compensate for this disadvantage should be prepared for the domestic accreditation system to be developed.

Second, customers who use the accredited medical institutions, in other words, in the position of the patients, the effectiveness of the accreditation program should be evaluated. In the early stage of the accreditation program introduction, inducing the participation of the medical institutions may be the facing challenges, but the accredited hospitals are different with the accredited hospitals in the long-term aspect, and the patients' trust should be established for maintaining the system continuously. In a number of countries where the accreditation program was conducted earlier than Korea, discussions about the difference between the accredited hospitals and non-accredited hospitals are in progress [22-25].

For this, the study of the ongoing research and the evaluation of the system based on the patients is needed, and the improvement plan for the derived problem should be prepared, so the establishment of the feedback system to supplement the system is needed.

Third, the basic values of the accreditation program are the safety of the patients and medical quality improvement. All indices of the accreditation evaluation system are concentrated on the safety of the patients and medical quality improvement and it is composed of the treatment system for patients, administrative management system, and performance management system. But the performance management system is composed with the monitoring of the pneumonia sector, critical patients sector, antibiotics sector, stroke sector, acute myocardial infarction sector, mortality sector and evaluation item of the improvement activity results report, and it is operated as items evaluating demonstration, so the

role as the performance index of the accreditation program is not clear, and the supplementation about it is needed in the clear evaluation about the accreditation program.

It is expected that in the future, studies to compensate the limitations of this study, such as a plan for analysis using the hospital management performance variable as the survey data of the relevant organizations and a study on the differences between accredited hospitals and non-accredited hospitals will be carried out.

References

[1] Lee GE, Park YH. "Recognition on Hospital Evaluation Result, Influences and Task of Mid Sized Hospital Employee Having Experience of the Hospital Evaluation", *The Korean Journal of Health Service Management*, Vol.3, No.2, (2009), pp.29-43.

[2] Lee SH. "A Study on Problems and Alternatives in Hospital Quality Assessment 2004", *Journal of Korean Hospital Association*, Vol.10(Sep;Oct), (2005), pp.32-43.

[3] Sul JS. "Study on the Way of Improving Hospital Evaluation Program", *Journal of Korean Hospital Association*, Vol.2(Jan;Feb), (2006), pp.83-98.

[4] Lee SM, Kim JY, Cho WH. "Opinions on the National Hospital Accreditation Program 2007", *Journal of Korean Society for Quality in Health Care*, Vol.14, No.2, (2008), pp.89-100.

[5] Cho DS, En JY, Kim IO, Lee YH, Yun KH. "The research on the actual conditions and the results of the evaluation of small & medium sized medical institutes", *J. Kor. Soc. Health-Syst. Pharm*, Vol.24, No.4, (2007), pp.265-279.

[6] Sack C, Scherag A, Lutkes P, Gunther W, Jockel KH et al. "Is there an association between hospital accreditation and patient satisfaction with hospital care? A survey of 37,000 patients treated by 73 hospitals", *International Journal for Quality in Health Care*, Vol.23, No.3, (2011), pp.278-283.

[7] Mazmanian PE, Kreutzer JS, Devany CW, Martin KO. "A survey of accredited and other rehabilitation facilities: education, training and cognitive rehabilitation in brain-injury programmes", *Brain Injury*, Vol.7, No.4, (1993), pp.319-331.

[8] Han WS, Kim JY. "The Effect of the Hospital Evaluation Programme to Business Performance in Medical Service Organizations", *The Korean Academic Association of Business Administration*, Vol.21, No.6, (2008), pp.2,549-2,580.

[9] Lee SW, Kim JY, Kim SK, Yang JS. "The Causal Relationship among Hospital Evaluation Programme, Internal Service Quality, Service Value, and Managerial Performance", *Journal of Korean Academic Society of Accounting*, Vol.15, No.2, (2010), pp.253-276.

[10] Woo HS, Jung JH, Lee EJ. "The Relationship between Hospital Evaluation Program and Hospitals Efficiency", *The Korean Academic Association of Business Administration*, (2012), 441 ~ 456.

[11] Bass BM. "From Transactional to Transformational Leadership: learning to share the vision", *Organizational Dynamics*, Vol.18, No.3, (1990), pp.19-31.

[12] Quinn RE. *Beyond Rational Management*, John Wiley & Sons Inc. (1991), pp.127-147.

[13] Paccioni A, Sicotte C, Champagne F. "Accreditation: A Cultural Control Strategy", *International Journal of Health Care Quality Assurance*, Vol.21, No.2, (2008), pp.146-158.

[14] Kaplan RS, Norton DP. "The Balanced Scorecard-Measures that Drive Performance", *Harvard Business Review*, Vol.70, No.1, (1992), pp.71-79.

[15] Schneiderman, AM. "Why Balanced Scorecard Fail", *Journal of Strategic Performance Measurement*, (1999) Jan, pp.6-11.

[16] Hair JF Jr, Anderson RE, Black WC. *Multivariate Data Analysis(6th Edition)*, Prentice Hall. (2006), pp.577-644.

[17] Gough L, Reynolds T. "Is Clinical Pathology Accreditation Worth It? A Survey of CPA-Accredited Laboratories", *Clinical Performance and Quality Health Care*, Vol.8, No.4, (2000), pp.195-201.

[18] Duckett S. "Changing Hospitals: The Role of Hospital Accreditation", *Social Science & Medicine*, Vol.17, No.20, (1983), pp.1,573-1,579.

[19] Pomey MP, Contandriopoulos AP, Francois P, Bertrand D. "Accreditation: A Tool for Organizational Change in Hospitals?", *International Journal of Health Care Quality Assurance*, Vol.17, No.3, (2004), pp.113-124.

[20] Fairbrother G, Gleeson M. "EQuIP Accreditation: Feedback from A Sydney Teaching Hospital", *Australian Health Review*, Vol.23, No.1, (2000), pp.153-162.

[21] Peterson CA. "Management, Faculty, and Accreditation Outcomes: A Survey of Physical Therapy Faculty and Program Directors", *Journal of Physical Therapy Education*, Vol.17, No.2, (2003), pp.22-31.

[22] Brasure M, Stensland J, Wellever A. "Quality Oversight: Why Are Rural Hospitals Less Likely to be JCAHO Accredited?", *Journal of Rural Health*, Vol.16, No.4, (2000), pp.324-336.

[23] Casey M, Klingner J. "HMOs Serving Rural Areas: Experiences with HMO Accreditation and HEDIS reporting", *Managed Care Quarterly*, Vol.8, No.2, (2000), pp.48-59.

[24] Simons R, Kasic S, Kirkpatrick A, Vertesi L, Phang T, Appleton L. "Relative Importance of Designation and Accreditation of Trauma Centers During Evolution of A Regional Trauma System", *Journal of Trauma-Injury Infection & Critical Care*, Vol.52, No.5, (2002), pp.827-834.

[25] Daucourt V, Michel P. "Results of The First 100 Accreditation Procedures in France", *International Journal for Quality in Health Care*, Vol.15, No.6, (2003), pp.463-471.